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EXAMINER	
TRAN, KHUONG N	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/784,332	ELLIS ET AL.	
	Examiner	Art Unit	
	Khuong Tran	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: from paragraph [00010], line 1 'n' should be changed to --an--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4-7, 9-19, 23-25, and 27-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Fijolek et al. (US Patent No. 7,068,571).

Regarding claim 1, Fijolek et al disclose an exemplary Dynamic Host Configuration Protocol (DHCP) message structure that consists of several parameters attributing the elements in a communication network. The teaching describes a structured address format having a plurality of address segments **[column 12, lines 9-20]**. Additionally, **Table 1 [column 12]** further discloses a list of parameters within the structured code that convey information about one or more properties of the managed resource.

Regarding claim 2, Fijolek et al teach a set of commands that may be created on a system for system administrators to enter necessary DHCP options configuration parameters. According to the teaching, the cable IP network is capable of having a two way gateway interface address. The address can be assigned a name to accommodate data downstream to the network devices such as cable modems (CM) **[column 14, lines 1-14]**.

Regarding claim 4, Fijolek et al disclose an exemplary system for managing the automatic registration and prepaid registration processs that consists of an Operations Support System with a Business Support System (OSS/BSS) **[column 24, lines 27-35]**. **Figure 15** further illustrates the different components that integrate with the OSS/BSS in the exemplary system **290**. It is also mentioned by the teaching that it is known in the art an OSS/BSS are used to manage the daily operation of the telecommunication network **[column 24, lines 38-44]**. Some operations discussed involve customer service management and customer databases. Therefore, the structured addresses are stored in an inventory system, in this case, databases that is to be managed by the OSS/BSS.

Regarding claim 5, Fijolek et al disclose in an exemplary embodiment that a system administrator can create configuration settings using boot files for each cable modem (CM) unit on the network. Thus based on a CM's customer service plan, a CM can be assigned a unique boot file that may add, delete, update, or restrict network-based features according to the administrator's settings **[column 14, lines 34-42]**. **Table 6** further illustrates a set of parameters with descriptions that a system administrator can manage and configure **[column 16, lines 45-47]**. Therefore, a boot

file that contains structured address, or parameters, can be stored in a network element such as a cable modem (CM).

Regarding claim 6, Fijolek et al disclose that the system administrator has the ability to create and assign boot files to cable modems (CMs) so that each CM can be uniquely identified and directed to appropriate configuration settings **[column 14, lines 34-38]**. Additionally, the administrator may specify a "Bootfile Path" parameter to set the full path located on a TFTP server, which is a managed resource and according to an exemplary embodiment this path is inserted into an outgoing DHCP packet for the cable modem on the receiving end **[column 14, lines 49-52]**.

Regarding claim 7, Fijolek et al teach an initialization process in which a network element, in this case, a cable modem (CM) initiate a Dynamic Host Configuration Protocol (DHCP) process. First the DHCP process allocates IP network addresses to clients and second, it provides structured address in a configuration setting to network entities **[column 11, lines 53-60]**.

Regarding claim 9, Fijolek et al disclose in **Table 6** that structured address, which is made up of parameters, has a field for Service Class. This parameter, or segment indicate a default service class assigned to CMs that make DHCP requests **[column 16]**. Subsequently **Table 3** substantiates the possibility for the system administrator to assign service class a value with numerical identifiers **[column 15, 33-40]**.

Regarding claim 10, Fijolek et al disclose in **Table 1** that part of the message structure utilize parameters such as hardware address type (HTYPE96) and hardware address length (HLEN 98), wherein each can indicate a value such as '1' for 10Mps

Ethernet **[column 12, table 1]**. It is inherently known that other values can be used to identify different transmission bit rates over the communication network.

Regarding claim 11, Fijolek et al disclose in **Table 1** that the communication network is capable of supporting Ethernet service based on the hardware configuration settings for hardware address type and address length. Additionally **Figure 2** illustrates the downstream and upstream protocols used in the CM. In bidirectional data-over cable systems, the CM 16 is connected to the cable network 14 in a physical layer 38 via a Radio Frequency (RF) interface) **[column 9, lines 58-60]**. It is further elaborated that the RF interface may use a signal modulation such as Quadrature Amplitude Modulation (QAM). As known in the art, QAM is used as means for encoding digital information over radio wire, or fiber optic transmission links **[column 10, lines 2-6]**. Thus the communication network also includes an optical network. Furthermore, a network layer 52 is above both the downstream protocol layer and the upstream protocol layer. The network layer 52 comprises an Internet Protocol (IP) layer 54, which corresponds to the OSI layer 3. As known in the art, IP is a routing protocol designed to route traffic within a network or between networks **[column 10, lines 50-57]**.

Regarding claim 12, Fijolek et al mention the format of structured message can contain dotted decimal notation as cited in **Table 3** where the incoming giaddr, mapped giaddr, and subnet mask fields each is separated by decimal points **[column 15]**.

Regarding claim 13, Fijolek et al disclose in **Table 3**, the system administrator sets a plurality of fields while configuring service classes. One of the fields corresponds to an incoming "giaddr" (gateway interface address), which is cpegiaddr (customer

premise equipment gateway interface address) **[column 15, lines 33-38]**. As noted before, CPE is defined as customer's equipments on the receiving end such as computers or VoIP devices **[column 2, lines 7-9]**. As a result, managed resources such as CPEs are assigned an IP address (incoming giaddr) by the administrator for the data service. Additionally, **Table 4** shows that the administrator can set MAC prefixes that are allowed on their network. However, it is noted that MAC prefixes are not limited to 3-byte values and other values such as 4-byte could also be used **[column 15, lines 49-54]**. Therefore, a structure address that carries a MAC prefix value means it contains unique service identifier.

Regarding claim 14, Fijolek et al disclose that the system administrator has the ability to create and assign boot files to cable modems (CMs) so that each CM can be uniquely identified and directed to appropriate configuration settings **[column 14, lines 34-38]**. Additionally, the administrator may specify a "Bootfile Path" parameter to set the full path located on a TFTP server, which is a managed resource and according to an exemplary embodiment this path is inserted into an outgoing DHCP packet for the cable modem on the receiving end **[column 14, lines 49-52]**. Hence, the full path itself is identified as the managed resource, which is the TFTP server and the "Bootfile Path" parameter of the structured address indicates that it operates as a path identifier to help locate the boot file on the managed resource.

Regarding claim 15, it has been taught by Fijolek et al that the structured address can be configured and managed by a system administrator **[column 13, lines 64-57, column 14, lines 1-5]**. Subsequently, referring to **Figure 5** Fijolek et al indicate that

configuration settings from the boot files are saved in the database 150 as text files, and a record is created for each registered cable modem (CM) **[column 17, lines 32-37]**. Since the structured addresses are stored in a database, it is inherent that these services are private as only an administrator can access such database in order to make change to settings that are on the server side.

Regarding claim 16, Fijolek et al disclose in **Table 3** that each incoming giaddr (gateway interface address) has a corresponding mapped giaddr. The mapped giaddr field corresponds to a CPE's downstream IP address **[column 15, lines 43-45]**. Thus according to Fijolek et al the first set of structured address that contains the incoming gateway interface address parameter can be translated into another separate second structured address with the mapped gateway interface address parameter.

Regarding claim 17, Fijolek et al illustrates in **Figure 12** an exemplary method for provisioning and access managing of a network device. At step 162, a first network device receives a first message from a second network device. Further the first message (structured address) includes a plurality of fields where one of the fields defines an identifier of the second network device. At step 166 and 168, a third network device intercepts the first message and determines the identity of the second network device using identifiers from the first message. At step 170, the third network device manages an assignment of the configuration parameters for the second network device. In one embodiment, the third network entity queries a database to retrieve a configuration record associated with the identifier of the network access device **[column 18, lines 6-56]**.

Regarding claim 18, Fijolek et al indicate in **Figure 1** that the managed resources consist of cable modems (CMs) and customer premise equipments (CPEs). Therefore, it is inherent that the communication network is circuit-based because hardware components are involved. Additionally, as stated in claim 6, the path to the TFTP server is inserted into an outgoing DHCP packet for the CM. As a result, it is evident that the system taught by Fijolek et al is capable of supporting circuit-based communication, packet-based communication and a combination thereof.

Regarding claim 19, Fijolek et al mention that the system administrator can save the CMs' configuration settings in the database **[column 18, lines 31-35]**. Furthermore, it is known in the art the OSS supports the daily operation of the telecommunication infrastructure, order negotiation, order processing, testing and billing. The BSS is one of the types of OSS and is typically used by network administrators to mange business operations such as billing, sales management, customer service management, and customer databases **[column 24, lines 38-43]**. Thus the system administrator manages the stored structure address in the database (inventory system) via the operational support system.

Regarding claim 23, Fijolek et al teach in Figure 5 an inventory system **[140, figure 5]** for managing resources **[16, figure 5]** of a private network communication **[142, figure 5]**. The inventory system comprising of structure address, which is structured message with a selected set of parameters as outlined in Table 6 **[column 16, Table 6]**. A structured address is having a plurality of address segments, where each segment is associated with one or more properties of a managed resource

[column 17, lines 36-55]. Additionally, according to an exemplary embodiment, a set of commands such as a "set dhcp" command may be created on a system for system administrators to enter necessary DHCP options configuration parameters. In one embodiment, the DHCP options configuration parameters may include a two-way CM's gateway interface address ("cmgiaddr") and a CPE gateway interface address ("cpegiaddr"). The "cmgiaddr" corresponds to a name of a cable IP network through which the administrator wants DHCP responses to be routed for downstream transmission to the CM 16, and the "cpegiaddr" corresponds to a name of the cable IP network through which the administrator wants DHCP responses to be routed to CPEs such as the CPE 18 **[column 14, lines 1-14, Table 1]**. Therefore, the inventory system has means for assigning to the managed resource a structure address via the command interface. The structured address has parameters that convey relevant information about one or more properties of the managed resource.

Regarding claim 24, Fijolek et al disclose in **Table 3** that each incoming giaddr (gateway interface address) has a corresponding mapped giaddr. The mapped giaddr field corresponds to a CPE's downstream IP address **[column 15, lines 43-45]**. Thus according to Fijolek et al the first set of structured address that contains the incoming gateway interface address parameter can be translated into another separate second structured address with the mapped gateway interface address parameter.

Regarding claim 25, Fijolek et al disclose the parameter SNAME 118 from **Table 1** in addition to the various parameters that specify a managed network resource. SNAME 118 contains the optional server host name with null terminated string **[column**

12, Table 1]. Hence, the inventory system has a mean for associating a name with the structured address assigned to a managed resource.

Regarding claim 27, Fijolek et al disclose in **Figure 15** a Business Support System/Operation Support System (BSS/OSS) **[294]** that is capable of handling daily operation of the telecommunication infrastructure such as customer-service management and customer service database **[column 24, lines 38-44]**. As noted from claim 19 that the CMs' configuration settings, or structured addresses, are stored as text files in the databases. A structured address is having a plurality of address segments, where each segment is associated with one or more properties of a managed resource **[column 17, lines 36-55]**. Additionally, according to an exemplary embodiment, a set of commands such as a "set dhcp" command may be created on a system for system administrators to enter necessary DHCP options configuration parameters. In one embodiment, the DHCP options configuration parameters may include a two-way CM's gateway interface address ("cmgiaddr") and a CPE gateway interface address ("cpegiaddr"). The "cmgiaddr" corresponds to a name of a cable IP network through which the administrator wants DHCP responses to be routed for downstream transmission to the CM 16, and the "cpegiaddr" corresponds to a name of the cable IP network through which the administrator wants DHCP responses to be routed to CPEs such as the CPE 18 **[column 14, lines 1-14, Table 1]**. Therefore, the inventory system has means for assigning to the managed resource a structure address via the command interface. The structured address has parameters that convey relevant information about one or more properties of the managed resource.

Regarding claim 28, Fijolek et al disclose in **Table 3** that each incoming giaddr (gateway interface address) has a corresponding mapped giaddr. The mapped giaddr field corresponds to a CPE's downstream IP address **[column 15, lines 43-45]**. Thus according to Fijolek et al the first set of structured address that contains the incoming gateway interface address parameter can be translated into another separate second structured address with the mapped gateway interface address parameter.

Regarding claim 29, Fijolek et al disclose the parameter SNAME 118 from **Table 1** in addition to the various parameters that specify a managed network resource. SNAME 118 contains the optional server host name with null terminated string **[column 12, Table 1]**. Hence, the inventory system has a mean for associating a name with the structured address assigned to a managed resource.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3, 26, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fijolek et al. (US Patent No. 7,068,571) in view of Boreham et al. (US Patent No. 6,785,686).

Regarding claim 3, Fijolek et al disclose in **Table 1** a list of possible parameters that are included in a DHCP message structure assigned to each manage resource such as a cable modems (CMs) and customer premise equipments (CPEs) such as

computers **[Figure 15]**. Fijolek et al however fail to teach the implementation of a domain naming system (DNS) service to translate the computer coded structured messages to human readable names. Boreham et al teach the mapping of computer host names to Internet Protocol (IP) addresses. Thus all of the computer resources become clients of the DNS server **[column 1, lines 23-27]**. Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Fijolek et al to include a domain naming system service as taught by Boreham et al for translating between the name and the structured address assigned to a managed resource. One is motivated as such to allow users of an organization's computing resources to easily locate computers on a network by remembering host names rather than numerical IP addresses **[column 1, lines 27-30]**.

Regarding claim 26, Fijolek et al disclose in **Table 1** a list of possible parameters that are included in a DHCP message structure assigned to each manage resource such as a cable modems (CMs) and customer premise equipments (CPEs) such as computers **[Figure 15]**. Fijolek et al however fail to teach means to translate between the name and the structured address assigned to the managed resource. Boreham et al teach the mapping of computer host names to Internet Protocol (IP) addresses. Thus all of the computer resources become clients of the DNS server **[column 1, lines 23-27]**. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Fijolek et al to include a domain naming system service as taught by Boreham et al for as a mean for translating between the name and the structured address assigned to a managed resource. One is motivated as such to

allow users of an organization's computing resources to easily locate computers on a network by remembering host names rather than numerical IP addresses **[column 1, lines 27-30]**.

Regarding claim 30, Fijolek et al disclose in **Table 7** a set of exemplary parameters that is created for each network device and stored in the database 150 in **[column 23, lines 65-67, Figure 5]**. Furthermore, it's been noted in **claim 19** that a system administrator can access the database via the operational support service (OSS/BSS). Fijolek et al however fail to teach means to translate between the name and the structured address assigned to the managed resource. Boreham et al teach the mapping of computer host names to Internet Protocol (IP) addresses. Thus all of the computer resources become clients of the DNS server **[column 1, lines 23-27]**. Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Fijolek et al to include a domain naming system service as taught by Boreham et al for as a mean for translating between the name and the structured address assigned to a managed resource. One is motivated as such to allow users of an organization's computing resources to easily locate computers on a network by remembering host names rather than numerical IP addresses **[column 1, lines 27-30]**.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fijolek et al. (US Patent No. 7,068,571) in view of Verteuil (US Publication No. 2004/0219932).

Regarding claim 8, Fojilek et al teach a method to include parameters in a DHCP structured message for providing to host machines on the network. Though it is

mentioned in the teaching that a message structure can include a plurality of other parameters as the field OPTIONS 122 for optional parameters is made available **[column 12, Table 1]**, Fojilek et al, however, did not specify using a parameter to identify a zone in which service traffic is transported. Verteuile teaches location based tracking applications for comparing a mobile unit location to a location of interest. Such location is a point identified by geographical coordinates, a boundary, or a predefined service zone definition. This comparison may be a binary determination, matching determination, or a proximity determination **[paragraph 0003, lines 1-10]**. Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Fojilek et al to designate a parameter for service zones for managed network resources with one of the proposed determinations as taught by Verteuille. One is motivated as such to utilize such location information to monitor and provide service based on the location **[paragraph 0002]**.

7. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fijolek et al. (US Patent No. 7,068,571) in view of Chang et al. (US Publication No. 2003/0074468).

Regarding claim 20, Fijolek et al disclose a method for identifying resources associated with a communication network by using parameters in a DHCP structured message for providing to host machines on the network. However, Fijolek et al fail to teach the method of associating the structured address with a circuit identifier (CID) and further associating the CID with a path by which traffic of a service is transported over the communication network. Chang et al teach a method of identifying the virtual circuit

identifier (VCI) allocation scheme based on bit representations and bit permutations of link numbers. The method includes the steps of mapping the interconnection network with a virtual circuit identifier and using the virtual circuit identifier to assign a path for data through the interconnection network from an input port to an output port **[paragraph 0009]**. Additionally according to another embodiment, the method of assigning paths through an interconnection network comprises the step of mapping the interconnection network to a table of virtual circuit identifier wherein the virtual circuit identifier include the physical restrictions and traffic patterns of the interconnection network. Next, the virtual identifiers are used to assign a path for data through the interconnection network from an input port to an output port of the interconnection network **[paragraph 0010, lines 1-10]**. Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Fijolek et al to designate a parameter for a virtual circuit identifier for managed network resource and assign it a path as taught by Chang et al. One is motivated as such for maximizing the utilization and throughput of network resources **[paragraph 0003, lines 9-11]**.

Regarding claim 21, Fijolek et al disclose a method for identifying resources associated with a communication network by using parameters in a DHCP structured message for providing to host machines on the network. However, Fijolek et al fail to teach the method of associating the structured address with a second circuit identifier (CID) and further associating the second CID with a path by which traffic of a service is transported over the communication network. Chang et al teach a method of identifying

the virtual circuit identifier (VCI) allocation scheme based on bit representations and bit permutations of link numbers. The method includes the steps of mapping the interconnection network with a virtual circuit identifier and using the virtual circuit identifier to assign a path for data through the interconnection network from an input port to an output port **[paragraph 0009]**. Additionally according to another embodiment, the method of assigning paths through an interconnection network comprises the step of mapping the interconnection network to a table of virtual circuit identifier wherein the virtual circuit identifier include the physical restrictions and traffic patterns of the interconnection network. Next, the virtual identifiers are used to assign a path for data through the interconnection network from an input port to an output port of the interconnection network **[paragraph 0010, lines 1-10]**. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Fijolek et al to designate a parameter for a second virtual circuit identifier for the managed network resource and assign it a path as taught by Chang et al. One is motivated as such for maximizing the utilization and throughput of network resources **[paragraph 0003, lines 9-11]**.

Regarding claim 22, Fijolek et al disclose a method for identifying resources associated with a communication network by using parameters in a DHCP structured message for providing to host machines on the network. However, Fijolek et al fail to teach the method of associating the structured address with a second circuit identifier (CID) and further associating the second CID with a second path by which traffic of a service is transported over the communication network. Chang et al teach a method of

identifying the virtual circuit identifier (VCI) allocation scheme based on bit representations and bit permutations of link numbers. The method includes the steps of mapping the interconnection network with a virtual circuit identifier and using the virtual circuit identifier to assign a path for data through the interconnection network from an input port to an output port **[paragraph 0009]**. Additionally according to another embodiment, the method of assigning paths through an interconnection network comprises the step of mapping the interconnection network to a table of virtual circuit identifier wherein the virtual circuit identifier include the physical restrictions and traffic patterns of the interconnection network **[paragraph 0010, lines 1-6]**. In another embodiment, the physical restrictions include the number of states of the interconnection network. Still other embodiments include virtual circuit identifiers where physical restrictions are based on the number of switching elements in each stage of the interconnection network, the number of ports for each switching element in the interconnection network, and the number of links between each input port and each output port in the interconnection network. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Fijolek et al to designate a parameter for a second virtual circuit identifier for the managed network resource and assign it another second path as taught by Chang et al. One is motivated as such for maximizing the utilization and throughput of network resources **[paragraph 0003, lines 9-11]**.

Conclusion

8. Any response to this Office Action should be **faxed** to (571) 273-8300 or **mailed** to:

Commissioner for Patents,
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-Delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khuong Tran, whose telephone number is (571) 270-3522. The examiner can normally be reached Mon-Fri from 7:30AM - 5:00PM.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Q. Tieu, can be reached at (571) 272-7490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have question on

access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BENNY Q. TIEU
SPE/TRAINER